

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: INVUE

Report Number: P597149

Luminaire Tested: **MSA-SA4C-835-U-T2-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P597149
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-9)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4C-835-U-T2-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS
EACH AND TYPE II OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14961 lumens
Efficiency: N/A
Efficacy: 66.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G3

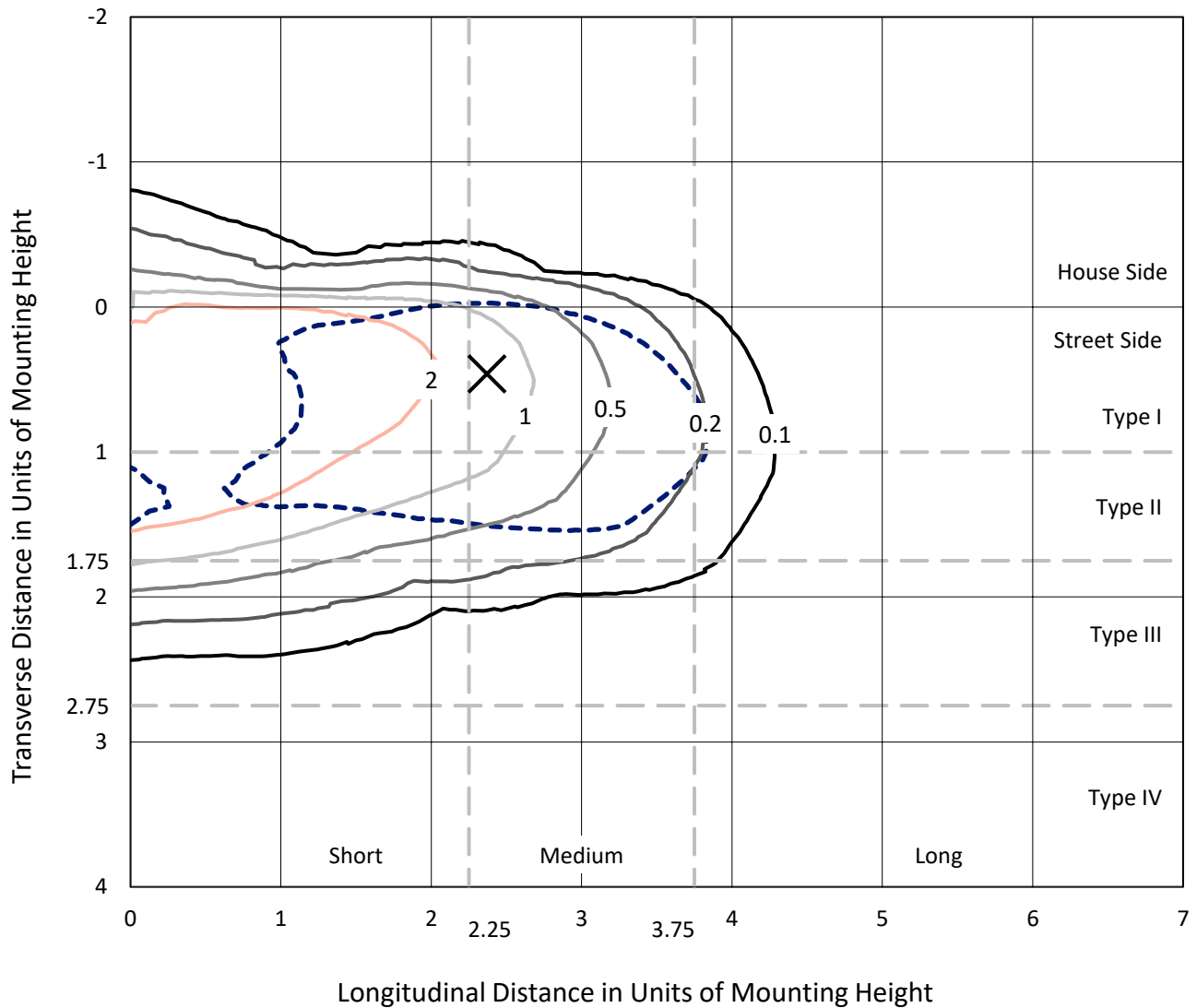
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

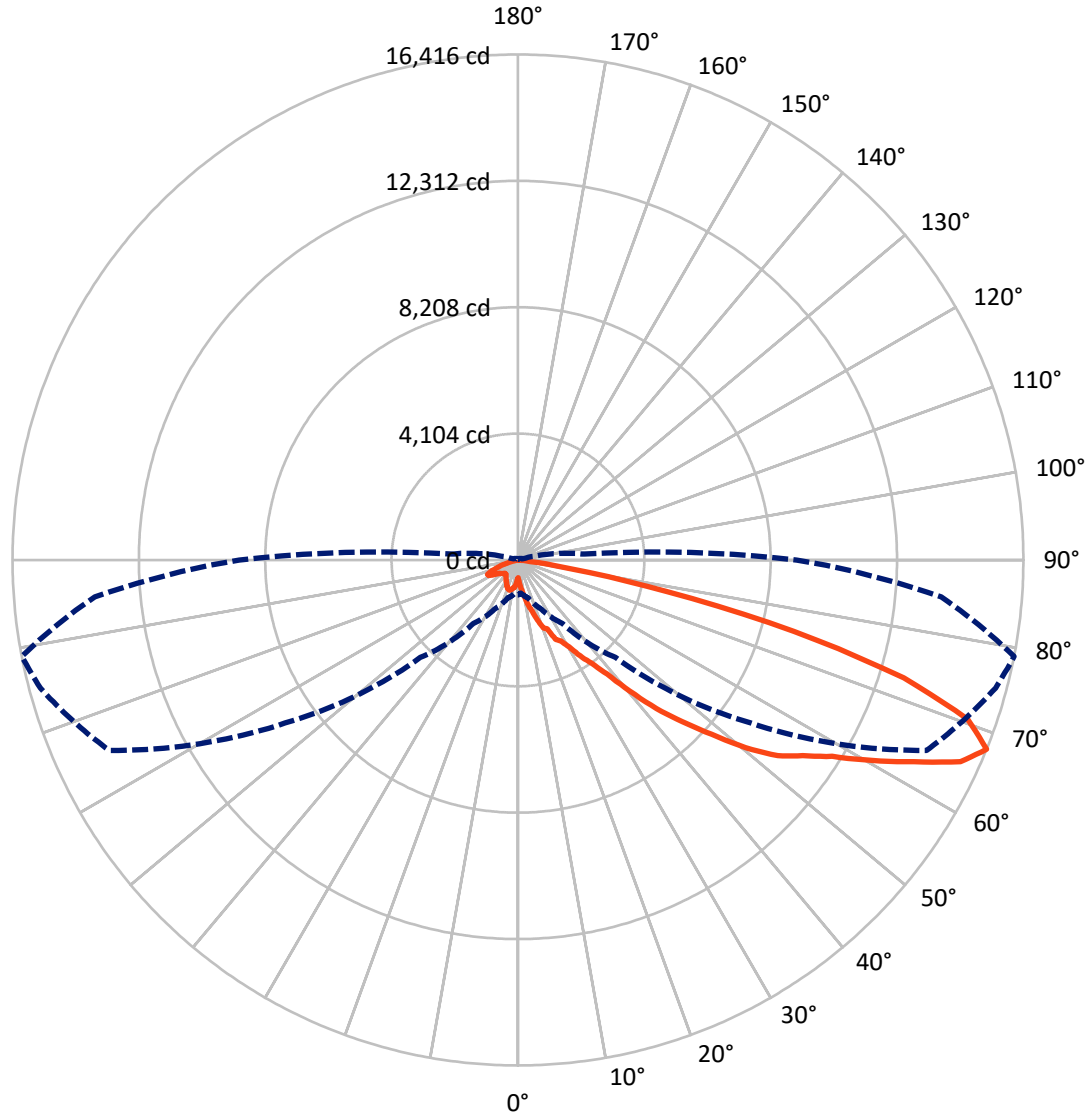
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.5 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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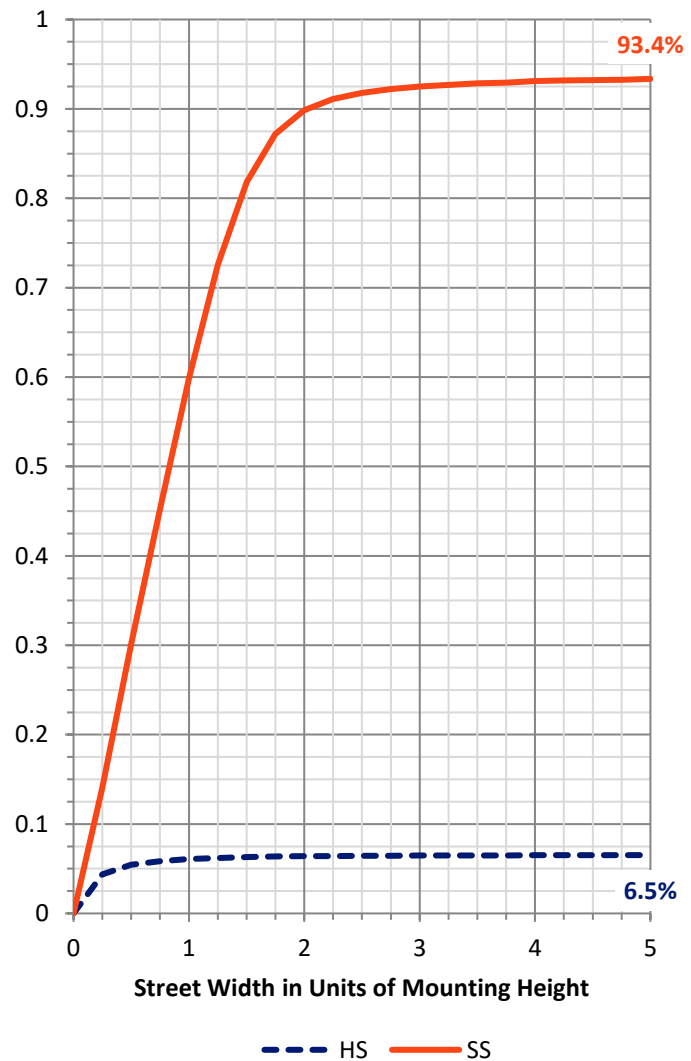
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	983.0	0.0	983.0
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	13978.0	0.0	13978.0
	% Fixture	93.4	0.0	93.4
Total	Lumens	14961.0	0.0	14961.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.8	0.6
10°-20°	334.3	2.2
20°-30°	644.9	4.3
30°-40°	1266.9	8.5
40°-50°	2537.9	17.0
50°-60°	4056.5	27.1
60°-70°	4081.5	27.3
70°-80°	1841.3	12.3
80°-90°	113.9	0.8
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	14961.0	100.0
0°-180°	14961.0	100.0



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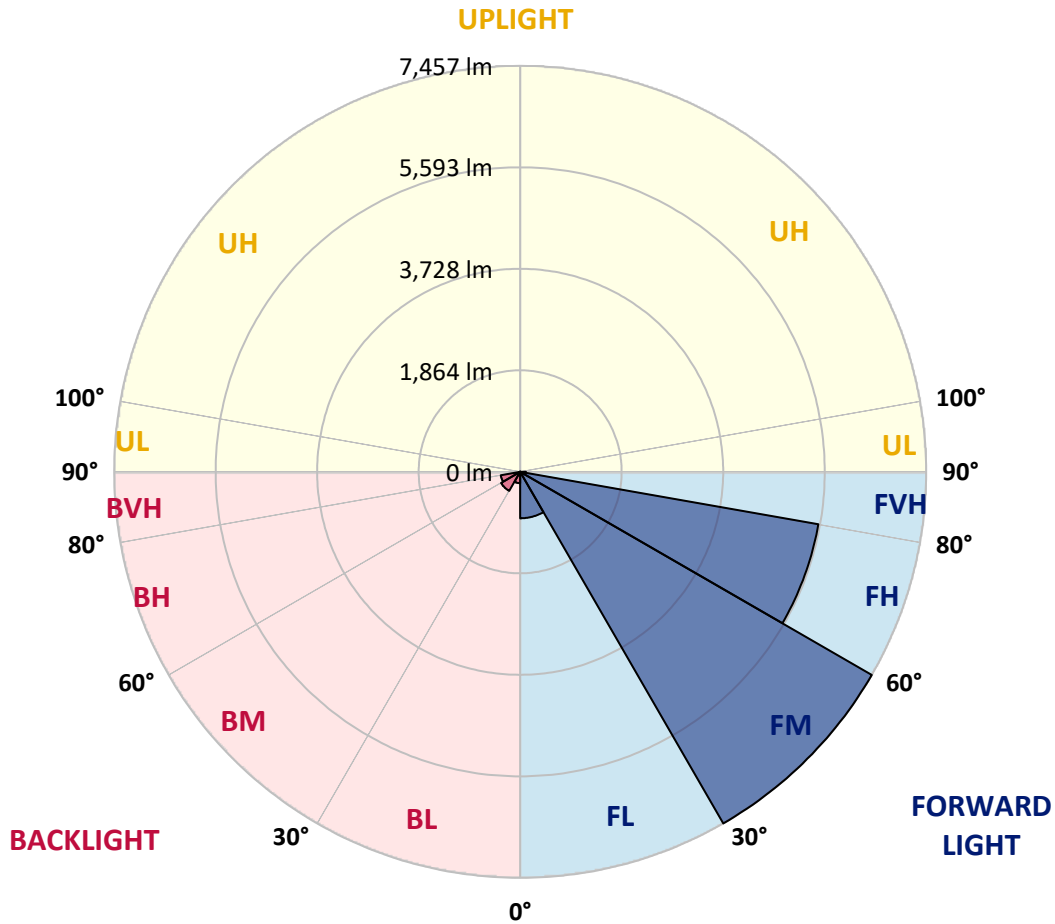
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	854.1	5.7			
FM (30°-60°)	7456.8	49.8			
FH (60°-80°)	5560.4	37.2			G3/7500
FVH (80°-90°)	106.7	0.7			G2/225
BL (0°-30°)	209.0	1.4	B1/500		
BM (30°-60°)	404.4	2.7	B1/1000		
BH (60°-80°)	362.4	2.4	B1/500		G1/500
BVH (80°-90°)	7.3	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G3

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	576.5	576.5	576.5	576.5	576.5	576.5	576.5	576.5	576.5	576.5	576.5
2.5°	778.5	750.5	705.1	730.7	729.1	742.3	717.5	690.3	646.6	690.3	693.6
5°	1120.8	1068.9	1035.9	1029.3	993.0	959.2	951.7	923.7	902.3	863.5	898.1
7.5°	1396.3	1372.4	1313.8	1307.2	1218.1	1168.6	1184.3	1171.9	1090.3	1049.9	1083.7
10°	1513.4	1472.1	1480.4	1472.1	1434.2	1448.2	1416.1	1378.9	1313.8	1247.0	1162.9
12.5°	1558.7	1552.1	1620.6	1612.3	1701.4	1808.6	1736.9	1675.0	1524.1	1507.6	1393.0
15°	1656.1	1697.3	1687.4	1722.0	1778.9	1961.2	1959.6	1974.4	1814.4	1728.6	1562.9
17.5°	1742.7	1773.2	1723.7	1763.3	1918.3	2028.8	2176.5	2118.7	2136.9	2049.5	1793.0
20°	1705.5	1740.2	1690.7	1666.8	1939.8	2149.2	2346.4	2304.3	2413.2	2358.7	2004.9
22.5°	1937.3	1872.1	1747.6	1670.1	1873.8	2146.8	2406.6	2582.2	2563.3	2429.7	2202.0
25°	2223.5	2183.9	2034.6	1897.7	1915.8	2131.9	2596.3	2854.4	2910.5	2853.6	2389.2
27.5°	2609.4	2600.4	2295.2	2235.8	2059.4	2066.8	2625.9	3197.5	3069.6	2980.6	2607.8
30°	3113.4	3041.6	2679.5	2602.0	2341.4	2213.6	2807.4	3493.6	3399.5	3278.3	2813.2
32.5°	3655.2	3665.9	3204.1	2948.4	2738.9	2587.2	2735.6	3632.1	3807.8	3709.6	3069.6
35°	4270.5	4318.3	3753.3	3453.1	3045.7	2822.2	3044.1	4057.7	4372.7	4114.6	3413.6
37.5°	5218.1	5216.4	4556.6	3958.7	3662.6	3420.2	3557.9	4444.5	5067.1	4704.3	4030.5
40°	6051.9	5870.4	5256.8	4569.8	4108.0	4042.0	3942.2	4973.9	5808.6	5590.0	4578.9
42.5°	6674.5	6546.7	5805.3	5270.8	4698.5	4489.0	4453.5	5750.0	6903.0	6597.0	5361.6
45°	7419.3	7000.3	6454.3	5972.7	5389.6	5328.6	5245.3	6537.6	8176.4	7486.9	6042.0
47.5°	8086.5	7692.3	7176.0	6557.4	5887.7	6390.8	6070.8	7229.6	9102.5	8455.1	6792.5
50°	8648.1	8229.2	7651.0	7180.1	6893.1	7234.5	6700.9	7799.5	10102.9	9578.4	7494.3
52.5°	8934.3	8460.1	8013.1	7721.9	7897.6	7820.9	7555.4	8489.8	10955.7	10563.1	8116.2
55°	8699.3	8235.8	8048.5	8192.9	8726.5	8504.6	8526.1	9559.4	11760.6	11219.6	8657.2
57.5°	7656.8	7233.7	7317.0	7712.1	8734.7	9315.3	9632.8	10598.6	12406.4	12037.8	9491.8
60°	5792.1	5451.5	5759.9	6460.9	7913.3	9153.7	10418.0	11637.8	13329.3	13213.8	10755.3
62.5°	3537.3	3352.5	3789.6	4663.8	6305.9	8361.1	10875.7	13023.3	14316.5	14439.4	12095.5
65°	1804.5	1721.2	2085.7	2854.4	4260.6	6868.4	10545.0	13884.3	15336.7	15790.3	13373.0
67.5°	1136.5	1082.9	1277.5	1741.0	2513.8	4479.9	9232.9	14637.3	16057.5	16416.3	13799.4
70°	787.6	753.8	922.0	1195.0	1586.0	2413.2	6855.2	13934.6	15486.0	15502.5	12767.6
72.5°	499.8	473.4	637.5	884.9	1170.3	1246.2	3929.8	10934.3	13255.9	13103.3	10339.6
75°	324.1	310.9	404.9	648.2	899.0	768.6	1942.2	7378.0	9505.0	9265.8	6867.5
77.5°	232.6	224.3	271.3	433.0	640.0	537.7	870.9	4397.5	5449.8	4926.9	3333.6
80°	140.2	139.4	196.3	271.3	455.3	379.4	402.5	1996.7	2113.0	1722.9	1018.5
82.5°	70.1	72.6	109.7	174.8	292.8	248.2	183.9	664.7	567.4	418.1	206.2
85°	16.5	20.6	57.7	120.4	146.8	99.0	87.4	174.0	155.9	117.9	60.2
87.5°	0.0	0.0	18.1	28.9	39.6	16.5	29.7	33.0	42.1	33.0	12.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	576.5	576.5	576.5	576.5	576.5	576.5	576.5	576.5	576.5	576.5	576.5
2.5°	694.4	684.5	624.3	608.7	607.0	589.7	593.8	577.3	578.1	615.2	615.2
5°	884.9	827.2	769.5	718.3	683.7	634.2	616.1	608.7	602.1	616.9	626.0
7.5°	1039.2	954.2	850.3	739.0	635.9	564.9	555.0	536.9	530.3	545.1	556.7
10°	1107.6	1002.0	859.4	696.9	600.4	542.7	494.8	469.3	464.3	463.5	467.6
12.5°	1252.8	1121.6	869.3	681.2	576.5	513.0	458.5	415.7	376.1	380.2	376.1
15°	1369.1	1214.0	869.3	643.3	518.8	455.3	359.6	338.1	332.4	341.4	334.0
17.5°	1544.7	1305.5	825.6	575.7	469.3	353.8	317.5	315.9	327.4	340.6	332.4
20°	1650.3	1317.9	752.2	498.1	385.1	306.8	293.6	280.4	296.9	307.6	303.5
22.5°	1760.0	1318.7	678.8	456.9	310.1	279.6	258.1	247.4	249.9	259.8	261.4
25°	1807.0	1286.6	610.3	402.5	281.2	249.9	227.6	216.1	212.0	216.9	215.3
27.5°	1934.8	1224.7	536.1	343.1	267.2	221.9	201.2	187.2	174.8	183.1	184.7
30°	1953.0	1204.9	495.7	305.2	249.1	196.3	178.1	163.3	154.2	165.8	165.8
32.5°	2010.7	1096.1	475.0	289.5	230.1	181.4	156.7	146.0	144.3	151.8	152.6
35°	2099.8	1048.2	444.5	277.1	212.8	164.1	141.0	136.1	134.4	140.2	140.2
37.5°	2401.6	988.9	410.7	266.4	197.9	155.0	136.9	128.7	129.5	134.4	137.7
40°	2602.0	996.3	360.4	253.2	180.6	146.8	128.7	122.9	122.1	124.5	127.0
42.5°	2974.0	1002.0	338.1	239.2	167.4	136.9	120.4	116.3	113.0	115.5	117.9
45°	3389.6	1032.6	326.6	227.6	160.0	131.1	113.0	110.5	103.1	104.7	108.0
47.5°	3790.5	1143.9	312.6	211.1	153.4	127.8	105.6	99.8	94.8	94.0	97.3
50°	4245.7	1251.9	296.9	193.0	146.8	122.9	98.1	89.1	85.8	85.8	88.2
52.5°	4653.1	1355.0	282.1	180.6	141.9	113.8	91.5	82.5	80.0	80.0	83.3
55°	5082.0	1463.1	268.9	169.1	135.3	104.7	85.8	77.5	76.7	75.1	77.5
57.5°	5839.1	1698.9	252.4	159.2	126.2	97.3	80.8	72.6	70.9	68.5	70.9
60°	6941.8	2061.0	230.9	149.3	115.5	92.4	76.7	66.8	64.3	60.2	61.0
62.5°	8019.7	2353.8	206.2	136.9	105.6	87.4	70.1	60.2	56.1	51.1	52.0
65°	8943.4	2469.2	179.8	122.1	95.7	75.9	61.0	52.8	47.0	40.4	39.6
67.5°	9052.2	2180.6	154.2	108.0	85.8	64.3	52.0	47.0	37.9	32.2	30.5
70°	8146.7	1624.7	128.7	95.7	74.2	54.4	44.5	41.2	35.5	30.5	28.0
72.5°	6487.3	1199.2	108.0	84.9	65.2	46.2	37.9	38.8	35.5	29.7	26.4
75°	4290.2	686.2	88.2	70.9	54.4	37.1	34.6	34.6	33.8	28.0	24.7
77.5°	2064.3	296.1	67.6	56.1	43.7	28.0	31.3	31.3	32.2	25.6	20.6
80°	585.6	89.1	42.1	37.9	32.2	19.0	24.7	23.9	21.4	14.8	9.1
82.5°	104.7	34.6	19.0	19.8	18.1	7.4	14.0	13.2	10.7	5.8	0.8
85°	28.9	13.2	10.7	11.5	9.1	2.5	5.8	7.4	5.8	3.3	0.0
87.5°	7.4	5.8	7.4	8.2	6.6	0.8	2.5	0.8	2.5	0.8	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)